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Interrelationships between population and environment in rural areas of developing countries

Report of the Secretary-General

SUMMARY

At its twenty-fifth session, the Population Commission called for further research on the interrelationships between population, resources, the environment and development and requested that a report on population and the environment be submitted to its twenty-sixth session. The present report, which was prepared in response to that request, provides an overview of recent research findings on a significant aspect of the broad range of matters pertaining to the population-environment nexus, namely, the impact of rapid population growth on the state of the environment in the rural areas of selected developing countries.

The overview is preceded by a brief discussion of studies on population-environment interrelationships at the national and global levels. The report then describes the state of knowledge of the environmental impacts of increasing population pressures on agricultural land in three types of critical ecological zones: along the margins of tropical rain forests, along the edges of deserts and in long-settled, densely populated regions. Among the technological, socio-economic and cultural processes that mediate ecological effects of population growth, attention is directed to agricultural development and migration. The report concludes with implications of recent research findings for development policies and further investigations of these issues.

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INTRODUCTION

1. In the past 10 years reports of receding forests, advancing deserts and depleted soils in the rural areas of developing countries have led to widespread concern about environmental degradation, its causes and means to slow or reverse these trends. Among the factors suggested as contributing to environmental degradation is rapid population growth.

2. The present report reviews a number of studies that have attempted to assess the impact of population change on some of the environmental trends that are occurring in the rural areas of selected developing countries. The report represents an initial attempt to assess research findings on but a single aspect of a much broader issue, namely, the impact of global demographic trends on the entire range of environmental issues facing all nations, both developed and developing. The rural areas were selected as the subject of the review in recognition that the majority of the populations of the developing countries reside in these areas and that in rural areas, the impact of population variables on the environment may be more direct.

3. In order to provide a context for the findings with regard to developing countries, the report begins with a brief review of some studies that dealt with population-environment interactions at the global level. The report then describes research findings on population-environment relationships in three critical ecological zones in the rural areas of the developing regions.

I. FINDINGS FROM AGGREGATE DATA

4. Aggregate data on national population trends and trends in food imports has been used to suggest that many developing countries in which population is growing rapidly have suffered environmental damage which is so extensive and severe that they can no longer produce a sufficient volume of foodstuffs to maintain adequate levels of nutrition. In addition to citing the increasing number of developing countries that import food, such studies often cite case studies of so-called "environmental" refugees who have been forced to abandon what had once been productive lands, which had become barren due to the excessive pressure imposed by attempts to meet the demands of rapidly growing populations (Jacobson, 1989).

5. Such studies are generally of little use in identifying the role played by population factors because they do not sufficiently take into account the roles played by other factors that may have little to do with population growth and yet could be largely responsible for the observed trends in food imports. Among such factors are the adoption of national agricultural policies which tend to limit the returns to foodstuff-producing smallholders. The failure to take fully into account the possible effects of other factors that might contribute to environmental degradation characterizes many analyses of population-environment interrelationships at the national and global levels and thus limits their value in assessing the impact of demographic variables.

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6. Some attempts to develop models that would take into account the range of variables that, along with population change, contribute to environmental degradation have been abandoned because the interrelationships are too complex to model in a manner that would be comprehensible to potential users (Slade, 1987). A number of other analysts (Kelley, 1988; MacKellar and Vining, 1987) have asserted that population growth has significant impacts on the environment, but they do not try to estimate these relationships or include them in their models.

7. Thus far, two major environmental trends, desertification and soil erosion, have not had such an adverse impact on food production as to reduce world-wide average food consumption. In the aggregate, food production has kept pace with population increase (Srinivasan, 1987). This conclusion, when considered alongside numerous reports of local-level, population-induced environmental degradation, suggests that in the study of population-environment interrelationships, greater emphasis should be placed on the spatial distribution of desertification and soil degradation than on the overall magnitude of such degradation.

8. Over the past 20 years desertification has not posed a serious threat to food supplies considered at the global level; but the populations of certain regions have suffered profoundly from malnutrition due to the desertification of once productive agricultural lands. The process, but not the impact, of tropical deforestation occurs in the same spatially concentrated manner. The extinction of plant and animal species, which is often the result of tropical deforestation, also tends to occur in geographically concentrated areas. The places in which such environmental degradation is concentrated will be referred to as "critical ecological zones".

9. In the developing countries, critical ecological zones can be found, among other places, along the margins of tropical rain forests, along the edges of deserts and in long-settled, densely populated regions. The following section will describe the interaction of the demographic and environmental dynamics, which is one of the factors determining the pace of environmental degradation in those zones. The discussion will emphasize migration and agricultural development, which are major mediating factors in determining the impact of population growth in these critical ecological zones.

II. POPULATION-ENVIRONMENT RELATIONSHIPS IN CRITICAL ECOLOGICAL ZONES

10. Although this section will be chiefly concerned with the role played by population factors in land degradation, it should be noted that critical ecological zones also suffer from many other environmental problems, prominent among which are unsatisfactory and declining air and water quality. Increased population densities in long-settled areas contribute to an increase in the proportion of contaminated water sources in those areas, while population growth also leads to a decline in water quality in sparsely populated regions along the margins of deserts and forests owing to the rudimentary nature of sanitary facilities in many of these areas.

11. Some critical ecological zones also suffer from air pollution. For example, high levels of acid rain have been observed in Central Africa. This may be related to the extensive burning taking place in the savanna regions, which in turn may be a response by shifting cultivators to population pressure (Simons, 1989).

A. Tropical deforestation

12. In recent years, many observers of conditions in tropical forests have expressed concern over the possibility of climatic change and the extinction of plant and animal species as a result of accelerated rates of tropical deforestation (Ehrlich and Ehrlich, 1990). Many have also noted that variations in rates of deforestation are statistically associated with rates of population growth, suggesting the possibility that population growth may have played a significant role in the decrease of the area covered by tropical forests.

13. Case studies of deforestation in the late nineteenth and early twentieth centuries indicate that there had been extensive clearing of forests in specific locales of the developing regions, such as the Irrawaddy Delta of Myanmar (Tucker and Richards, 1983). However, comprehensive, reliable and internationally comparable base-line data for forested areas in the nineteenth century are not available. Thus, it is not possible to calculate reliable long-term measures of rates of global deforestation.

14. Advances in remote sensing techniques have, however, made it possible to measure recent changes in forest cover with a high degree of accuracy. Using these techniques, the United Nations carried out the first world-wide study of tropical deforestation during the early part of the 1980s. This study measured rates of deforestation in more than 60 countries (FAO-UNEP, 1982). After allowing for differences in data quality, the report of the study estimated that the area covered by tropical forests was declining at the rate of 0.62 per cent per annum during the study period (Lanly, 1983).

15. Since 1982 remote sensing studies of deforestation have been undertaken in such developing countries as Brazil, Cameroon, Costa Rica, India, Indonesia, Myanmar, the Philippines, Thailand and Viet Nam. For six of these countries, the estimates of rates of deforestation for the mid-1980s are significantly higher than corresponding estimates for the 1970s, suggesting that there may have been an acceleration in these rates (World Resources Institute, 1990).

16. The studies cited above demonstrate that rates of deforestation vary significantly according to the type of forest. The rates are much higher for secondary forests (2.06 per cent per annum) than for primary forests (0.27 per cent per annum) (Sedjo and Clawson, 1983). The studies also demonstrate that deforestation is occurring more rapidly in Latin America and Asia than in Africa (Lanly, 1982). However, within each continent there are dramatic variations. Thus, the destruction of the forests of West Africa occurred rapidly, while the forests in Central Africa remained relatively intact (FAO-UNEP, 1982). These observations of variations in rates of deforestation over time and between countries have been used to investigate the causes of tropical deforestation, in particular, the role played by population factors.

17. The most influential theories of the causes of tropical deforestation suggest that the growth of peasant populations plays an important role in the process, but these theories differ from one another in their identification of the forces that lead peasants to destroy forests. Some theories emphasize demographic factors, while others emphasize political and economic variables. The former tend to posit that growing populations of small farmers create a scarcity of agricultural land which, in turn, leads to the expansion of agriculture into forested regions (Myers, 1984; Whitmore, 1984). A possible example of this process could be the migration of Indonesian peasants from the densely populated islands of Java and Madura to the sparsely populated and heavily forested islands of Kalimantan and Sumatra.

18. The explanations that emphasize political and economic factors often suggest that disparities of wealth and power in the larger society cause poor peasants to seek a livelihood on the margins of society, including the rain forests of remote rural regions (Blaikie and Brookfield, 1987; Collins 1986; Foweraker, 1981; Guppy, 1984; Ledec, 1985; Plumwood and Routley, 1982; Schmink and Wood, 1987). These analysts suggest that the unequal distribution of landholdings causes large numbers of the rural poor to lack rights to cultivate land, and thus they gravitate to unclaimed land on the frontier. As the number of landless poor increases so does the flow of migrants into communities on the fringes of the rain forest.

19. The latter explanation for tropical deforestation assumes that there is an absence of secure property rights over forested lands. Often national or subnational governments assert but do not enforce their property rights to large tracts of forested land, and thus anyone can make use of the land, although no one has property rights in the land (Bromley and Chapagain, 1984; Hazlewood, 1986; Southgate and others, 1984). In the more accessible areas, individuals and groups struggle to appropriate for themselves what is essentially a free good, establishing a claim to the land by clearing a portion of it and, thus, accelerating the rate of deforestation.

20. In assessing the impact of population growth relative to the impact of political and economic inequalities in the context of an absence of an enforced system of public property rights as an explanation for increasing rates of deforestation, recent studies (Rudel, 1989) indicate that the problem of identifying the contribution of population variables can be partially resolved by distinguishing between deforestation in different types of rain forest. Such studies suggest that the destruction of small islands of rain forests on mountain slopes in Central America or Central Africa occurs when peasants in the surrounding area "nibble" at the forests, expanding the cultivated area along the edge of the forest in small increments. Under pressure from an expanding population, peasants extend the area under cultivation at the expense of nearby forests.

21. Large blocks of rain forest present a more formidable challenge to peasant cultivators. Barriers to communication in the form of impassable rivers, difficult terrain and dense forests make it almost impossible to exploit a forested region without large, capital-intensive investments in infrastructure. When these investments open up a region for exploitation, the absence of enforced property rights in land may initiate a struggle to claim resources by clearing land, even in the absence of population pressure on nearby lands.

22. This argument suggests that in places like Central America, the Philippines, and Rwanda-Burundi, which contain relatively small islands of rain forest located within a vast sea of cleared land, variations in local rates of population increase largely explain observed variations in rates of deforestation. The same relatively strong statistical association between population increase and deforestation would also be found in regions such as West Africa, where a mosaic of cleared and forested land characterizes the landscape.

23. In regions bordering large blocks of rain forest, rapid population growth or an unequal distribution of land ownership in the absence of enforced property rights would produce high rates of deforestation only if extensive investments in infrastructure were made. For example, there were high rates of deforestation in relatively capital-rich developing countries, such as Brazil, during the 1970s and low rates of deforestation in relatively capital-scarce developing countries, such as Bolivia or Zaire. In these countries, where there are large blocks of rain forest, a combination of capital investments, population growth and the absence of enforced property rights is required to produce rapid deforestation.

24. While this argument has its clearest application in explaining variations in tropical deforestation across geographic regions, it also has important implications for variations in rates of deforestation over time. During periods of economic austerity, the relative absence of new construction projects in regions containing large tracts of rain forest is likely to reduce the rate of deforestation in settings where there are large blocks of forested land. If the periodic absence of economic opportunities on the frontier or in the cities reduces migration to these regions, as some have maintained (Vining, 1986), it may intensify the "nibbling" at rain forests in already settled regions. Able-bodied workers may remain in their villages and households, coping with adverse conditions by expanding, as far as possible, the area under cultivation near the villages. It should be noted, however, that this hypothesis remains to be confirmed by empirical studies.

B. Desertification

25. In contrast to the rapid accumulation of information about tropical deforestation during the past 10 years, information about desertification remains scanty and contradictory. The extent of desertification remains open to question, as does the impact of desertification on agricultural production. According to one estimate, desertification has reduced yields on the 2 billion hectares of productive drylands (UNEP, 1987). This is two thirds of the world's drylands, which sustain 300 million people. Furthermore, two thirds of Africa's non-desert lands, along with one third of Asia's and one fifth of Latin America's non-desert lands, could suffer from desertification in the near future (World Bank, 1987).

26. Various agencies and experts have produced estimates of the rate of desertification. According to one such estimate, 6 million hectares become desert, and an additional 21 million hectares lose their productive potential each year (Tolba, 1988).

27. Estimates of desertification in the Sahel are framed in terms of how far the Sahara advances to the south each year. These estimates of the desert's annual advance range from 5 to 150 kilometres. However, these estimates are based on a very limited body of evidence. Remote sensing studies and a small number of carefully done field studies suggest that the reports concerning the Sahel have not taken sufficient account of year-to-year fluctuations in vegetation and have underestimated the resiliency of vegetation on the margins of the deserts (Hellden, 1984; Olsson, 1984; Horowitz and Little, 1987; Nelson, 1990). Given these sources of uncertainty, there is a need for the application of land monitoring systems in the affected (mostly Sahelian) countries which can be used to measure and map the extent of desertification both within and across countries.

28. Despite the ambiguity about the magnitude of the problem, the role of population increase in causing desertification seems fairly clear. That role involves the quest for fuelwood and fodder and agricultural expansion. Remote sensing and numerous observational studies have documented the land degradation and desertification which are taking place around human settlements along the margins of deserts. As people range outward from these settlements in search of fuelwood and fodder for their animals, the environmental effects of their search can be observed in satellite images of these zones. Those images reveal bright, circular rings of denuded landscape surrounding most settlements.

29. A variety of studies indicate that the extension of rain-fed agriculture has been an important factor in the degradation of arid lands in a number of African countries. In the Sudan (Ibrahim, 1987), Niger (Painter, 1987) and Kenya (Talbot, 1986; Dietz, 1986), large numbers of peasants have moved into semi-arid regions with pastoralist populations and have begun practising agriculture. The intensification of land use has denuded the landscape, and the inevitable crop failures in these arid zones have caused subsistence crises.

30. Studies of African agricultural development cite land scarcity resulting from population growth in densely settled, well-watered regions as the cause for the colonization of arid zones by peasant farmers (Lele and Stone, 1989; Mensching, 1988). However, very little is known about the characteristics of these migrants or the circumstances which prompted their move. They may be young, landless families, or they may be relatively prosperous families that already have sufficient land but that are trying to increase the area they are able to cultivate.

31. The significance of the contributions made by growing populations of pastoralists to desertification is the subject of dispute. Pastoralists, such as the Masai, have increased significantly in numbers (Talbot, 1986), but evidence supporting assertions that livestock numbers have increased and pastures became degraded is difficult to obtain. Sandford (1976), for example, questioned how it was possible that livestock numbers could have increased if pastures were degrading. Questions of this kind could be resolved if better measures and data on desertification were available. The research required goes beyond the monitoring of desertification; also required are comparative historical studies of migration and land use which could be used to isolate the sequence of events (policy changes, population growth and migration) which may have contributed to desertification, which occurred in some areas but not others.

C. Land degradation in resource-poor zones

32. The developing countries include a number of regions in which large populations of impoverished peasants reside, most of whom eke out subsistence on small plots of land. Unlike areas experiencing desertification or tropical deforestation, resource-poor zones have been centres of agricultural production for decades. In recent years, population growth has outstripped productivity growth in some of these regions. Population growth did not induce commensurate increases in agricultural productivity, however, because the cultivators did not have sufficient resources to invest in new technologies and/or their Governments did not have the resources or institutional capacity to develop and extend the new technologies to small farmers (Muscat, 1985). Under these circumstances, land degradation generally occurs. Farmers convert the remaining patches of forest into fields and fallow their lands for shorter periods, thereby increasing the incidence of soil erosion in the region. Among regions with degraded soils are Java, the Brahmaputra-Ganges Delta and the hills of Nepal in Asia, southern Malawi and Burundi-Rwanda in Africa, and portions of the Andean highlands in South America.

33. While the pattern of degradation can be described, it is difficult to measure. Many problems confront those who try to measure soil erosion. Erosion occurs unevenly; a slow, steady loss of topsoil over several years may be followed by massive soil losses during one storm. If the measurements miss the storm, they may seriously underestimate soil losses. Furthermore, it is difficult to determine how broadly to extrapolate the findings derived from the study areas; to the entire valley? to the entire province?

34. Indirect measures hold some promise for improving estimates of land degradation. Okafor (1987), in a study of population pressure and land resource depletion in south-eastern Nigeria, suggested three such measures: farmland size per capita, fallowing frequency and an index of fragmentation in landholdings. A decline in the number of farmers selling their produce on the open market would suggest a deteriorating land base. As land productivity declines and populations increase, larger numbers of small farmers will consume all that they produce (Lele and Stone, 1989), so fewer will sell food grains. Finally, declines in productivity per hectare for major crops would suggest ongoing land degradation. These indirect measures, supplemented by case studies, should make it possible to assess, in a preliminary way, the connections between population change and land use in the largest of the impoverished regions.

35. Social and natural processes often appear to be inextricably confounded as causes for soil loss. Recent controversies over the importance of natural runoff in Nepal (McNicoll, 1990), as opposed to human-induced deforestation, as contributors to downstream flooding in India and Bangladesh is an example of the continuing uncertainty about the exact nature of the relationships in these matters. While the evidence for a connection between upland deforestation and downstream flooding in the Himalaya-Ganges Basin may not be compelling, evidence of population growth and increased flooding in north central China over six centuries provides more convincing evidence of the downstream effects of upstream deforestation (Chao, 1986).

36. Several historical studies of land use among the indigenous peoples of highland Bolivia have detailed how population increase and structural changes have interacted to intensify land use in the highlands. The 1954 land reform gave Bolivian peasants control over large tracts of land in the altiplano. The expanded access to land led to declines in the amount of fallowed land. Subsequent population increases among the landed peasants led to more intense land uses (Preston, 1969). Population increases among indigenous groups on the southern edge of the altiplano resulted in the extension of cropped land to lands at higher altitudes and a reduction in lands devoted to pasturing livestock (Godoy, 1984). The frequency with which peasants fallowed their land declined, and yields from potato fields began to fall, which could be considered as indirect evidence of soil degradation. In other areas of the Andes, the amount of severe soil degradation has been limited because "as rural communities experience population pressure and market penetration, they tend to change their production focus from higher to lower ecological zones" (Guillet, 1981, p. 147). In this instance, people avoided highland soil degradation by increasing tropical deforestation.

37. Recent studies of population and land use change in the Andes suggest that the pattern of land degradation may have reversed in the past two decades. Studies of rural population change in Peru, Ecuador and Colombia indicate that most villages, especially villages without a road, have begun to lose population (Williams and Griffin, 1978; Rudel and Richards, 1990; Preston, 1987) as large numbers of their younger residents move to cities. The loss of population has resulted in modest changes in land use; some landless peasants have acquired land, and some land consolidation has occurred (Preston and Taveras, 1980). If the size of landholdings and the intensity of land use are inversely related, as is usually the case, the population loss should lead to a reduction in rates of land degradation in this region.

38. Extreme land fragmentation characterizes southern Malawi. In this well-watered, densely populated zone of Africa, landholdings average under one hectare per household. To supplement their incomes from such small holdings, a large proportion of the adult males in the region engage in circular migration between their homes and places of employment in the South African mining belt. Higher yields are concentrated among the larger farmers, who have more access to fertilizers. Yields per hectare of both food and commercial crops have been declining since the 1950s. For example, the same dose of fertilizer produces smaller increments in production in the 1980s than it did during the 1950s (Lele and Stone, 1989). The land fragmentation and declining yields suggest that degraded soils are becoming more extensive in the region.

39. Pressures from a growing smallholder population have exacerbated problems of land fragmentation, deforestation and soil erosion in the highland regions of Rwanda and Burundi (N'diaye and Sofranko, 1990). Plots of land now average less than one hectare per family. As a result of the small average size of plots, large numbers of cultivators have extended the limits of cultivation to drier, lower elevation lands (Raison, 1981). Between 1966 and 1983 the amount of cultivated land doubled, increasing from 308,000 to 615,000 hectares (Tallon, 1988).

40. Journalistic accounts of the human uses of natural resources in the Himalayan region of Nepal paint a grim picture of environmental degradation fuelled by rapid

population growth (e.g., Eckholm, 1976). However, the empirical bases of this explanation of Himalayan environmental degradation appear flawed in several respects. Perhaps, of most importance, the explanation assumes a uniformity in types and causes of degradation which does not exist (Ives, 1987). For example, the explanation attributes deforestation to the collection of fuelwood. In some areas, however, it is the expansion of cropland rather than fuelwood collection which causes deforestation. In some areas, forests on private lands have actually increased in size. Furthermore, some reports have exaggerated the amount of downstream environmental damage caused by rapid population growth and deforestation. It is probably true that upstream deforestation causes downstream flooding (for a contrary view based on a review of the literature in hydrology, see Hamilton, 1987), but at this time it is virtually impossible to calculate the amount of flooding induced by the activities of growing human populations separately from the amount of flooding that results from natural fluctuations in rainfall and runoff.

41. Robert Repetto reported (1986) that one third of all cultivated uplands on the island of Java, Indonesia, were eroding at rates that were 10 times the rates at which replacement soils form, thus causing a decline in soil fertility. He reported that the extension of cultivation into the uplands stemmed from continued population growth in rural Java.

42. The average size of landholdings in the Brahmaputra-Ganges Delta declined from 1.7 to 1.0 hectares between 1960 and 1984 (Hossain, 1988). Farms are so small that many landholders have to supplement their farm income with wage labour. Although fertility rates have begun to decline, population growth is still about 2.3 per cent per year. The economic condition of the rural population deteriorated markedly during the 1970s as the real wages of agricultural workers fell. There is indirect evidence of ongoing soil erosion, in that successive nutritional surveys indicate that per capita daily energy intake declined about 16 per cent between 1962 and 1981 (Hasan and Ahmad, 1984).

43. There is a possibility of further intensification of agriculture in the delta. Soils are good, and a much greater proportion of the land could be irrigated and sown with high-yielding varieties of crops if funds for land improvement were made available. If the increments in income from these projects were widely distributed among farm families, farmers might retreat from the river banks and find less risky occupations.

44. The resource-poor areas described above are but examples of a wide variety of such areas. However, the picture of people in resource-poor areas which emerges from these profiles emphasizes that in some instances people find alternative livelihoods as the land, their primary resource, degrades; in other instances, perhaps less well-documented, peasants try to halt the degradation through land improvements and intensified agriculture. The former response usually involves migration, the latter, agricultural development. The nature of these responses and their relationship are described in the following section.

D. Responses to population pressures and resource degradation

45. Among other processes, migration and agricultural development condition the impact of population growth on the environment in all three of the critical zones. Twenty-five years ago, Ester Boserup (1965) outlined a pattern of agricultural development triggered by population increase. In an initial stage, farmers expand the area under cultivation. When they have exhausted the lands available for expansion, they begin to intensify their use of already cultivated land, shortening fallows, engaging in multiple cropping and engineering land improvements, such as irrigation systems. In effect, Boserup's model assumes that "the problem of population pressure gives rise to its own solution", a more intense use of land (Lele and Stone, 1989).

46. A number of factors affect the ability of cultivators to expand and intensify agriculture in response to population increases. Some populations will have a more difficult time expanding the area under cultivation than other populations because the accessibility of uncultivated arable land varies from place to place. Variations in the distribution of landholdings give rise to the same constraints. Claims to large areas of extensively cultivated land by large landholders in Latin America have closed off one avenue of expansion to smallholders (Shaw, 1989).

47. The history of agricultural intensification in a region is an important determinant of the response to the pressure of population growth. If cultivators have already intensified agriculture, as they have in many parts of South-East Asia, there may be few avenues of intensification open to them without a major infusion of funds from outside sources. Variations in the ability of central authorities to extend new technologies to smallholders will also affect the technological response to increasing population pressure (Bilsborrow, 1987).

48. Comparative historical and cross-national studies of agricultural development provide general support for Boserup's thesis of a causal link between population increase and agricultural intensification. For example, the most intense agricultural land uses in the developing world, involving large tracts of irrigated lands, occur in the most densely populated areas of the developing world, in southern and eastern Asia.

49. There are, however, important reasons to question the applicability of Boserup's thesis to populations in resource-poor areas in the late twentieth century. The initial studies of population increase and subsequent agricultural intensification did not specify the speed with which the change and response would occur. In the original formulation of the Boserup thesis change occurred slowly. In Europe, for example, populations increased gradually over the course of four or five centuries, and the technologies of agricultural production changed in response to the increase in population. The responses of Chinese agriculturalists to population pressures occurred over a similar five- or six-century period.

50. In recent years the rate of population change in developing countries has been much more rapid. In many of these countries, particularly in sub-Saharan Africa, populations have been doubling every 20 or 30 years. Under these circumstances, the growth of population may occur so rapidly that poor farmers are not capable

of adopting and perfecting the use of new techniques rapidly enough to keep up with the demand for food in the family. In this situation the farmer may turn to short-term stratagems, such as extending cultivation onto marginal lands or reducing the fallowing rate without increasing agricultural inputs. These activities yield short-term increases in the size of the harvest but, in adopting these practices, the farmers mortgage their futures by tolerating high rates of soil degradation. This "mining of the soil" appears to be especially widespread in Africa (Pingali and Binswanger, 1987; Lele and Stone, 1989). The prevalence of soil mining suggests, contrary to Boserup's thesis, that demographically induced intensification of agriculture by farmers will not produce sufficient increments in foodstuffs to feed growing populations.

51. The empirical basis for this conclusion remains somewhat shaky in the case of sub-Saharan Africa because, until recently, agricultural policies often gave smallholders little reason to make capital improvements in their land (Bates, 1981). In other words, the rapid increase in rural populations occurred during a period of inappropriate agricultural policy. Under these circumstances it would appear reasonable to attribute some of the soil-degrading agricultural practices and the absence of effective programmes for combating soil degradation to specific agricultural policies.

52. Agricultural development has a regional and a technological component. Of the six African countries studied by Lele and Stone, only one country (Kenya) exhibited a good match between the location of the agricultural population and the agricultural potential of its geographic regions. In many African countries, large portions of the agricultural population reside in regions with little agricultural potential. The mismatch between agricultural potential and population stems in part from historical patterns of disease (e.g., malaria in lower and wetter zones) and regional differences in public infrastructure investments (Lele and Stone, 1989).

53. Changes in land uses in critical zones appear to vary with the size of different migratory streams. Three types of migration that have land use impacts are: circular migration, where the sending region is a resource poor area; rural-rural migration, where the destination is an area undergoing desertification or deforestation; and rural-urban migration, where the sending region is a critical ecological zone.

54. Circular migration appears to increase in direct proportion to the pressure of population on the land. As landholdings become more fragmented and increases in yields fail to offset declines in the size of landholdings, small farms no longer provide a subsistence income for families, and the males begin to supplement their income by working elsewhere, in cities, mines, timber camps or on plantations (Conway, 1977).

55. Land use in many of the sending regions may be unaffected by labour migration. The migrant workers carry out the necessary agricultural tasks during the few months or days when they are at home. In other areas the absence of able-bodied workers has a pronounced impact on land use over a long period of time. Labour shortages in sending regions as diverse as the eastern slope of the

Peruvian Andes (Hiroaka, 1985; Collins, 1988) and the southern African highlands make it more difficult to maintain land improvements, such as dikes, terraces and ditches, which prevent land degradation. More generally, the absence of labourers may reduce a community's resiliency in the face of a disaster in ways which have environmental effects. For example, when landslides damage agricultural terraces in the Himalayas, the speed with which the terraces are repaired will depend on the availability of labour in a village. The more quickly the terraces are repaired, the less erosion will occur (Ives, 1987).

56. Migration from densely populated agricultural zones to arid and rain-forest regions has encouraged both desertification and tropical deforestation. Though the outmigration from the sending areas is often attributed to land scarcity, research on the origins of migrants to rain-forest regions raises questions about this assertion. While most migrants come from land-poor regions, they are not always landless and do not come from the poorest families in the sending regions. Above all, they regard the move into the rain forest as an economic opportunity rather than as a move born out of desperation (Connell and others, 1976; Hardjono, 1986; Simkins and Wernstedt, 1971). This pattern suggests that population growth in long-settled areas encourages migration to ecologically fragile zones, not by creating large numbers of landless peasants but by reducing the resources close to home (e.g. land and capital) which the wealthier families can exploit. Under these circumstances, prosperous farm families look for economic opportunities in agriculture in other regions. More generally, these findings suggest the importance of investigating in greater depth the forces which shape the flow of migrants from agriculturally established sending areas to ecologically marginal zones.

57. Outmigration offers some hope for reversing environmental degradation in ecologically degraded zones. Indications of a change in the landholding patterns in Andean areas which are experiencing heavy outmigration suggest that land uses may become more extensive in these zones. The relative absence of land improvement schemes for combating desertification argues for programmes to spur outmigration from these zones by fostering regional development in adjacent zones with more adequate water supplies (Nelson, 1990).

III. CONCLUSIONS

58. Two sets of conclusions can be drawn from the preceding discussion about population-environment interactions in developing countries. One set concerns the substantive trends in the human ecology of rural populations. These have clear implications for government policies to address well-understood environmental problems. A second set of conclusions concerns requirements for additional information which is needed to better address less well-understood environmental problems.

59. At present researchers are better able to count numbers of people than to measure their impact on the environment. Without improved methods of measuring both desertification and land degradation, countries and international agencies will be less able to launch a concerted effort to solve these problems.

60. Agricultural development has been very uneven across the developing world. The reasons for this are in large part historical, political and economic in origin, although the high cost of duplicating basic facilities in places with rapid population growth has also played a role in slow rates of development. The consequence has been declining standards of living for many peasant populations, particularly in Africa, and a related acceleration in rates of land degradation in densely populated, resource-poor areas.

61. Population growth in these densely settled agricultural regions, coupled with urban and regional development efforts elsewhere, has increased the volume of outmigration from resource-poor areas. One stream in this migratory current, rural-rural migration from resource-poor areas to ecologically marginal zones, has resulted in extensive desertification and deforestation in recent years.

62. It has long been predicted that smaller proportions of the annual increments in agricultural production will come from increasing the area under cultivation. In Africa and Latin America, however, this prediction has not been borne out. Most of the recent increases in agricultural production have come from extensions of the area under cultivation. This expansion in cultivated land has had a considerable environmental cost, because the newly cultivated lands were generally situated in ecologically marginal zones, on the edge of deserts or rain forests.

63. While the outlines of this environmentally destructive interaction between growing populations and land degradation are clear, the magnitude of the problems, their geographic distribution and their causes remain unclear. These ambiguities must be investigated analytically if Governments are to address these environmental problems in an effective way. Research which would improve our understanding of these issues is outlined below.

64. The data base available for use in assessing the impact of rural populations on the environment in developing countries is inadequate. There has been some progress, particularly in the use of remote sensing techniques to measure tropical deforestation. A 1982 study by the Food and Agriculture Organization of the United Nations measuring tropical deforestation world wide has provided valuable base-line data, and future updates should make it possible to monitor change in rates of deforestation. A comparable effort is needed to measure desertification. Such a study would also provide valuable base-line data, and periodic updates of the original study would make it possible to measure changes in the magnitude of the problem.

65. The measurement of soil degradation, though equally important, presents more difficult problems. The techniques of measurement are not widely agreed upon, and soil quality must be measured through labour-intensive ground surveys which require an effective governing institution if the results are to be credible.

66. It is necessary to investigate in greater depth the causes and consequences of rural outmigration from densely settled areas. Among the questions that should be studied are the following. Does heavy outmigration to cities produce a change in rural land use? In particular, does the loss of population produce land consolidation and more extensive land use patterns? What circumstances induce

migration from long settled regions to ecologically marginal forests or arid lands? What role does increased population density in long settled areas play in decisions by peasants to move to marginal lands?

67. These questions have important policy implications. If colonists in critical ecological zones are drawn from relatively prosperous peasant families in search of economic opportunities, then efforts to redirect regional development funds away from these zones should reduce rates of immigration and agricultural intensification. Similarly, it might be expected that programmes of regional development in areas adjacent to the critical zones would precipitate migration out of the critical zones and relieve pressures on the land. If, however, most migration into critical zones is part of a "nibbling" process in which poor peasants integrate a new piece of land in a more arid zone into the households' nearby agricultural activities, the peasants engaging in the agricultural expansion may have so little capital and may be so wedded to a subsistence routine that they would not respond to a change in a Government's regional development priorities. Under these circumstances, family planning programmes and soil-conserving rural development efforts may be required to bring about a decline in the extent of land degradation. Interventions to reduce rapid population growth through family planning in such cases may be instrumental in preventing, or at least reducing, further environmental degradation.

68. In general, because rural-rural migration appears to lead to rapid rates of deforestation and desertification, there is a need to know much more about its causes. With a better understanding of why people move to critical ecological zones, it may be possible to devise programmes that reduce the size of these migratory streams.

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FOLLOW-UP TO THE RECOMMENDATIONS OF THE INTERNATIONAL CONFERENCE ON POPULATION, 1984

Activities of the United Nations system in the field of population

Report of the Secretary-General

SUMMARY

The present report provides an overview of the main activities in the field of population carried out by the various units and organizations of the United Nations system during the period 1988-1989. The report consists of two chapters. The first chapter describes the major changes in the institutional and legislative framework, the organizational structure and the co-ordination mechanisms of the units and organizations working in the field of population; it also provides information on the human and financial resources for population activities in the United Nations system. The second chapter contains an overview of the main activities in the field of population being carried out by the organizations during the period under consideration. The overview contains only a selected number of examples of the work being done by the organizations and includes some of the topics covered by the World Population Plan of Action.

* E/CN.9/1991/1.

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INTRODUCTION

1. The World Population Plan of Action, adopted by the World Population Conference in 1974, 1/ assigned various responsibilities to the United Nations system in the implementation of the Plan. This was reaffirmed by the International Conference on Population, held at Mexico City in 1984. 2/ As part of the follow-up to the Mexico City Conference, the Economic and Social Council requested the Secretary-General to prepare periodic overviews of population activities within the United Nations system (resolutions 1985/4, 1986/7 and 1987/72). The present document is the third in this series; the first report was prepared in 1987 (E/1987/4) and the second in 1989 (E/1989/11).

2. The present report concentrates on the substantive activities of the various entities of the system and summarizes the major changes that have taken place during the last biennium. The report consists of two chapters: chapter I refers to changes in the institutional framework and legislation, in the organizational structure and resources and in the mechanisms for the co-ordination of population activities within the system; chapter II presents an overview of the main activities in the field of population. The Consultative Committee on Substantive Questions (Programme Matters) of the Administrative Committee on Co-ordination (ACC) did not meet in 1990; therefore, a draft of the report was circulated to the relevant units and organizations of the system for comments. The report was prepared by the Population Division of the Department of International Economic and Social Affairs of the United Nations Secretariat, as the substantive secretariat of the Population Commission.

I. INSTITUTIONAL FRAMEWORK, RESOURCES AND CO-ORDINATION OF POPULATION ACTIVITIES WITHIN THE UNITED NATIONS SYSTEM

A. Policies, mandates and long-range objectives

3. At the global level, the World Population Plan of Action and the recommendations for its further implementation are the main legislative instruments that guide the work of the United Nations system in the field of population. Other important legislative instruments exist at the regional and sectoral levels (see E/1987/4, para. 5, and E/1989/11, paras. 3-4).

4. During the period 1988-1989, there have been no major changes in the policies or mandates of the organizations of the system in relation to population. Nevertheless, as the organizations are entering the 1990s, some of them mentioned certain reorientations in their programmes of work. The Economic and Social Commission for Asia and the Pacific (ESCAP), for example, indicated that the Commission, at its forty-sixth session in 1990, designated the field of population as one of the high-priority sectors of the Commission's activities. The Economic Commission for Latin America and the Caribbean (ECLAC) and its Latin American Demographic Centre (CELADE) reported on the increasing capabilities of CELADE to respond to country demands for population information at a decentralized level through the development of systems such as the Retrieval of Census Data for Small

Areas by Microcomputer (REDATAM) and the Package for National and Sub-national Population Projections (PRODEM). The regional population plans and programmes that were adopted in the mid-1980s will be reviewed and assessed in the mid-1990s, and their results will not only sharpen the programmes of work of the Commissions but will also constitute an important input for the international meeting on population that has been convened, in principle, by the Council for 1994.

5. As part of the celebration of its twentieth anniversary, the United Nations Population Fund (UNFPA) carried out a review and assessment of 20 years of accumulated experience in key population areas. The results of this exercise were presented to the Governing Council of the United Nations Development Programme (UNDP) in 1989. The Governing Council endorsed the findings of the report and welcomed the convening of the International Forum on Population in the Twenty-first Century, which was held at Amsterdam in November 1989. The General Assembly, in its resolution 44/210, requested the Executive Director of UNFPA to examine the programme implications of the Amsterdam Declaration on a Better Life for Future Generations (A/C.2/44/6, annex), which was adopted by the Forum, and to report to the Assembly at its forty-fifth session on progress in the analysis of resource requirements for international population assistance. The Amsterdam Declaration contained a series of recommendations to Governments, the international community and UNFPA. The provisions in the Declaration are expected to help redefine some of the Fund's strategies and constitute important inputs for the international meeting on population to be held in 1994.

B. Organizational structure

6. During the period under consideration, there were a number of small but significant changes in the organizational structure and setting of population activities. UNFPA continued and accelerated the process of decentralization of authority and responsibility that began in 1987 and initiated a vigorous process of rotation of personnel. Decentralization to the field, which gives authority to approve up to $500,000, has accelerated the development of new projects and the approval of rephasings and revisions.

7. In November 1989, the General Conference of the United Nations Educational, Scientific and Cultural Organization (UNESCO) adopted the medium-term plan for the period 1990-1995, which provides the basis for certain organizational changes, including (a) organization of an intersectoral and inter-agency co-operation project on research, education and communication in the field of population; (b) appointment of a co-ordinator and deputy co-ordinator of population programmes, at the D-2 and D-1 levels, respectively; (c) refocus of population activities within the social sciences sector, with a concentration on (i) social and economic organization of disadvantaged urban communities and urban rehabilitation, (ii) changing structures and functions of the family, (iii) integration of international migrants in host countries and (iv) women as active agents of change.

C. Planning, programming and budgeting

8. The most important event in relation to planning, programming and budgeting in the Secretariat has been the preparation of the medium-term plan for the period 1992-1997. On the basis of a recommendation made by the Committee for Programme and Co-ordination, the General Assembly considered the proposed plan in 1990. The preparation of the plan included wide consultations with sectoral, technical, regional and central bodies in the United Nations, as well as with Member States and the specialized agencies. While in the previous plan (1984-1989) population was a major programme composed of central and regional programmes, in the new plan the global component of the population programme appears as an element of major programme IV, International economic co-operation for development, and the regional population components as subprogrammes under each programme of regional co-operation for development. The new plan is less detailed than its predecessor and provides more flexibility to adapt to changing circumstances and priorities. At present, the global component has five subprogrammes: (a) analysis of demographic variables at the world level; (b) world population projections; (c) population policy and socio-economic development; (d) monitoring, review and appraisal, co-ordination and dissemination of population information; and (e) technical co-operation in population. The first four subprogrammes will be carried out by the Population Division of the Department of International Economic and Social Affairs, and the last subprogramme by the Population Branch of the Department of Technical Co-operation for Development. At the regional level, the new subprogrammes indicate the objectives and expected type of activities that will be carried out by the Secretariat.

D. Resources

9. The two previous reports on activities of the United Nations system in the field of population showed how difficult it is to define the boundaries of the field of population (see E/1987/4, paras. 9-10, E/1989/11, paras. 8-9). In addition to presenting an intellectual challenge, such difficulty may raise problems of accountability and of area of competence. Following a suggestion made by the Population Commission, the second report, which was submitted to the Commission at its twenty-fifth session, indicated the budgetary resources of the various programmes and organizations, using both the interorganizational categories adopted by ACC and the items embraced by the World Population Plan of Action. While the ACC classification has the advantage of allowing an easy comparison of population vis-à-vis the other 15 sectors, it has the limitation of excluding important components.

10. The Commission has found the use of both classifications beneficial because of their complementarity. Table 1, which is prepared by ACC every two years, presents total expenditures of all organizations, by organization and by sector, for the biennium 1988-1989, but does not include those corresponding to the World Bank. ACC mentions that expenditures are reported under one heading only, and when one organization finances activities that are executed by another organization, the related expenditures appear under the executing organization. However, it seems that the total amount reported for population in table 1 ($606.5 million), does not correct for double counting, as has been done in previous reports.

Table 1. Total expenditures of all organizations, by organization and by sector: all sources of funds

1988-1989 expenditures

(Millions of United States dollars)

Sector	United Nations a/	UNICEF	UNDP b/	UNFPA a/	UNRWA	WFP	ILO	FAO	UNESCO	ICAO	WHO	UPU	ITU	WMO	IMO	WIPO	UNIDO	IAEA	Total
I. Policy-making organs c/						9.0	15.2	20.5	28.3		27.2		17.1	2.7	0.9	1.1	1.6	14.5	138.1
II. Programmes of activity																			
010 Political affairs	364.2		0.3				2.2											134.0	500.7
020 General development Issues, policies and planning	733.1	23.7	180.9				68.9	122.5	52.7										1 181.8
030 Natural resources	180.9	1.4	55.1				3.7	147.5	43.6					15.7				38.3	486.2
040 Agriculture, forestry and fisheries	52.1	21.6	54.3			690.1	12.0	782.9										46.8	1 659.8
050 Industry	53.5		31.5			10.0	8.3	32.2									433.7	12.9	582.1
060 Transport and communications	79.4		25.8			39.7	23.5			174.9		33.1	213.3		65.4			1.5	656.6
070 International trade and development finance	258.6		10.6				14.6	43.7								19.6			347.1
080 Population d/	72.4	0.1	1.8	370.8			25.9		17.5		118.0								606.5
090 Human settlements	116.0	0.6	7.6			20.2	3.1		1.3										148.8
100 Health	8.0	769.3	29.5			401.6	1.6	27.5			1 204.5							65.2	2 507.2
110 Education	1.4	82.9	18.3			61.3	22.8		156.0										342.7
120 Employment	2.5	19.0	9.4				320.1				7.2							4.6	362.8
130 Humanitarian aid and relief	1 930.2	112.8	8.5		495.9	541.4	3.8		5.0		1.9								3 099.5
140 Social conditions and equity	172.8	85.7	8.9				57.2		30.5										355.1
150 Culture	97.9	26.0	3.3				0.5		81.6							7.8			217.1
160 Science and technology	120.3		52.9				7.2	9.0	69.3		1.3			77.5		51.5		112.4	501.4
Total	4 243.3	1 143.1	498.7	370.8	495.9	1 773.3	590.6	1 185.8	485.8	174.9	1 360.1	33.1	230.4	95.9	66.3	80.0	435.3	430.2	13 693.5

Source: Report of the Administrative Committee on Co-ordination on expenditures of the United Nations system in relation to programmes (E/1990/79), table 3.

a/ Total expenditures of UNFPA for 1988-1989 amounted to $370.8 million, of which $174 million were channelled through the United Nations (including the regional commissions), UNICEF and the specialized agencies. The figure reported in the table ($370.8) should be $196.8, if double counting were eliminated (see table 2 for more details).

b/ Figures cover expenditures of funds managed by UNDP, with the exception of allocations made to other bodies included in the table of expenditures under the UNDP biennial budget.

c/ Expenditures for policy-making organs of the United Nations and some other organizations have been distributed to the programmes of activity in which they are engaged.

d/ The figures appearing in the sector "Population" are different from those reported in table 2 (see text).

11. The organizations were invited to report on the financial and personnel resources of their population activities for the biennium 1988-1989, using both the ACC interorganizational classification and the categories of the World Population Plan of Action. The figures appearing in table 2 show the "core" of the population programme of the United Nations system, as defined by the ACC classification ($659.3 million), and the expanded list of items of the Plan of Action ($1,477.7 million). It should be noted that the amounts reported in table 2, under the heading of the Plan, reflect the judgement of each organization itself in describing its own work programme with reference to the topics of the Plan of Action; nevertheless, this information provides an indication of the magnitude of the total amount of resources being devoted to population activities within the system.

12. During the period under consideration, almost all the programmes experienced a considerable expansion. UNFPA, in particular, considerably increased its resources despite the fact that its most important donor in previous years made no financial contribution to the Fund during the past two bienniums.

Table 2. Personnel and budgetary resources for population activities in the United Nations system for the period 1988-1989

Organization	Professional resources: Headquarters RB	Headquarters XB	Headquarters T	Field RB	Field XB	Field T	Total RB	Total XB	Total T	Budgetary resources (in thousands of US dollars): Activities included in the ACC inter-agency classification: XB UNFPA a/	XB Others	XB Total	Activities included in the World Population Plan of Action: RB	XB UNFPA a/	XB Others	XB Total
United Nations Secretariat																
DIESA																
Pop. Div.	27	7	34	0	0	0	27	7	34	5 315	1 815	537	7 667	5 315	1 815	537	7 667
Stat. Off. b/	7	11	18	0	0	0	7	11	18	972	0	0	972	972	1 318	1 100	3 390
DTCD c/	0	9	9	0	48	48	0	57	57	0	53 315	1 208	54 523	0	53 315	1 208	54 523
CSDHA	-	-	-	-	-	-	-	-	-	..	..	..	..	..	..	..	..
Regional commissions																
ECE	2	2	4	0	0	0	2	2	4	480	662	24	1 166	480	662	24	1 166
ESCAP	6	9	15	0	0	0	6	9	15	966	4 166	25	5 157	966	4 166	25	5 157
ECLAC	6	16	22	0	0	0	6	16	22	1 056	4 380	1 894	7 330	1 056	4 380	1 894	7 330
ECA	6	7	13	0	12	12	6	19	25	1 332	7 842	0	9 174	1 332	7 842	0	9 174
ESCWA d/	7	4	11	0	0	0	7	4	11	1 663	1 731	0	3 394	1 663	1 731	0	3 394
Habitat	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
UNCTAD	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
UNEP	..	..	..	..	..	..	..	..	..	..	104	..	104	..	104	..	104
UNHCR	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
United Nations bodies																
UNICEF	0	1	1	0	2	2	0	3	3	..	148	..	148	..	148	..	148
UNFPA e/	0	104	104	0	63	63	0	167	167		196 819	0	196 819		196 819	0	196 819
WFP	-	-	-	-	-	-	-	-	-	-	-	-	..	-	-	-	..
Specialized agencies																
ILO	6	9	15	0	18	18	6	27	33	3 390	20 124	750	24 264	3 390	20 124	750	24 264
FAO	1	6	7	0	9	9	1	15	16	1 000	6 686	510	8 196	1 000	6 686	510	8 196
UNESCO	5	7	12	0	15	15	5	22	27	0	19 630	0	19 630	1 200	19 630	100	20 930
WHO	23	69	92	8	19	27	31	88	119	10 811	53 354	44 751	108 916	112 416	53 354	111 100	276 870
World Bank f/	50	0	50	0	0	0	50	0	50	211 900	0	0	211 900	850 600	0	0	850 600
UNIDO	-	-	-	-	-	-	-	-	-	-	4	-	4	-	4	-	4
Total:	146	261	407	8	186	194	154	447	601	238 885	370 780	49 699	659 364	980 390	372 098	117 248	1 469 736

Source: Responses provided by the organizations.

(Footnotes on following page)

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(Footnotes to table 2)

Notes: The following symbols have been used: two dots (..) indicate that data were not provided; a dash (--) indicates that the amount is negligible (i.e., less than $US 1,000); and a hyphen (-) indicates that the item is not applicable.

a/ The figures in these columns correspond to expenditures for population projects financed by UNFPA and executed by the various units and organizations, including the Fund itself, as reported by each unit and organization. The total amount of $370.8 million was obtained by adding the figures corresponding to the units of the system ($174 million) to those corresponding to the Fund ($196.8 million, which include the administrative and programme support costs). Figures were taken from "UNFPA financial report and audited statements for the year ended 31 December 1988 and report of the Board of Auditors" (A/44/5/Add.7), pp. 46 and 55, and "UNFPA financial report and audited statements for the year ended 31 December 1989 and report of the Board of Auditors" (A/45/5/Add.7), pp. 32 and 41.

b/ Includes relevant activities in the area of demographic data collection.

c/ Includes technical co-operation activities of DTCD in population and demographic statistics.

d/ The figures on professional resources and on budgetary resources financed by the regular budget were taken from "Proposed programme budget for the biennium 1990-1991. Part IV. Economic, social and humanitarian activities. Section 14. Economic Commission for Western Asia" (A/44/6, sect. 14), pp. 63-65.

e/ The amount of expenditures corresponding to projects executed by the Governments themselves, by non-governmental organizations and by the Fund itself for 1988-1989 amounted to $196.8 million (estimated from the source mentioned in note a/ above).

f/ Figures cover the fiscal years 1988 and 1989 (1 July 1988-30 June 1989) and include administrative budgets.

E. Co-ordination

13. The Secretary-General may consider requesting ACC to establish an ad hoc task force for the 1994 international meeting on population once the Economic and Social Council decides on the preparatory options for the meeting. The task force is expected to provide inter-agency co-ordination during the preparatory process.

14. The Amsterdam Declaration calls upon UNFPA to act as a focal point and facilitator for channelling and co-ordinating expanded levels of international population assistance to recipient countries.

15. The Joint Consultative Group on Policy (JCGP), established in 1981 by the executive heads of the United Nations Children's Fund (UNICEF), UNDP, UNFPA and the World Food Programme (WFP) to promote child survival and development, population and family-planning approaches and to give special attention to the poor and to other vulnerable groups, has become actively involved in programme harmonization, women in development, structural adjustment, training of personnel, programme collaboration in Africa, and the sharing of common premises and services.

II. OVERVIEW OF MAIN ACTIVITIES IN THE FIELD OF POPULATION

16. The topics of the World Population Plan of Action, as set out in the recommendations for action adopted by the Mexico City Conference, can be conceived as a matrix composed of two dimensions. The first dimension embraces the substantive components of the Plan: socio-economic development, the environment and population; the role and the status of women; development of population policies; and population goals and policies (population growth, morbidity and mortality, reproduction and the family, population distribution and internal migration, international migration, and population structure). It should be noted that the categories of the first dimension are not necessarily mutually exclusive; in fact, some activities may refer to more than one category, as is the case, for example, of studies on the status of women and fertility. Furthermore, analysis of "growth" is intrinsically linked to the analysis of "structure". For practical purposes, activities that cover more than one category are reported under the most prominent of the categories. The second dimension would include the elements of the fifth topic of the Mexico City recommendations: the promotion of knowledge and policy (data collection and analysis, research, management, training, information, education and communication). These two dimensions have been labelled "population sectors" and "functions in the field of population", respectively (see figure). The clustering of the topics of the Plan into these two broad groups takes into account that their components can be grouped along these two distinct dimensions; in fact, each one of the "functions" could refer specifically to any of the "population sectors" (e.g., research on internal migration or dissemination of information on mortality risks). The organizations were invited to provide a short summary of the activities carried out by them during the biennium 1988-1989 in each one of the categories of the Plan of Action and to indicate the proportion of resources devoted to each one of these topics; this information appears in table 3. It should be noted that the proportions reported are an indication of the magnitude of the efforts made by the organizations rather than an exact account of the financial resources allocated to their population activities.

The population matrix: activities contemplated in the World Population Plan of Action

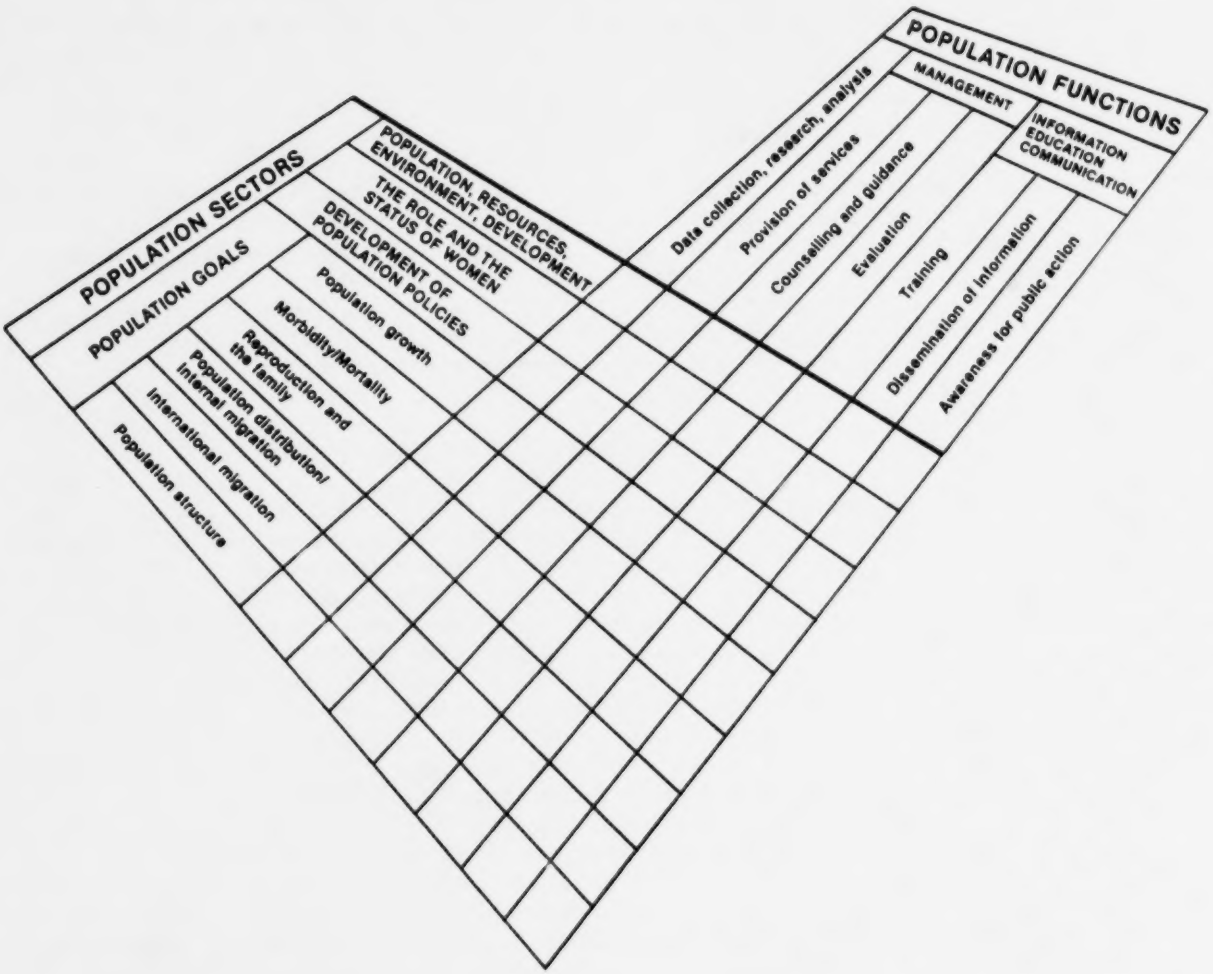

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Table 3. Population activities contemplated in the World Population Plan of Action and covered by the United Nations system, as expressed in percentage of resources allocated (1988-1989)

Organization	Population sectors										Functions in the field of population					
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
United Nations Secretariat																
DIESA:																
Pop. Div.	16	6	15	9	11	17	10	6	10	100	40	55	4	0	1	100
Stat. Off.	x	x	x	x	x	x	x	x	x	-	75	15	0	5	5	100
DTCD a/	x	x	x	x	x	x	x	x	x	-	34	18	0	48	0	100
CSDHA		x							x	-	x	x	x	x	x	-
Regional commissions																
ECE	5	5	42	0	0	3	0	0	45	100	15	80	5	0	0	100
ESCAP	15	--	36	9	9	9	9	9	4	100	20	35	10	25	10	100
ECLAC	5	10	15	10	15	10	15	10	10	100	15	15	5	25	15	75
ECA	10	--	20	10	20	20	10	--	10	100	20	40	10	15	15	100
ESCWA b/	20	10	10	15	10	0	0	20	15	100	30	30	10	18	12	100
Habitat	35	15	0	15	0	0	15	5	15	100	30	20	0	30	20	100
UNCTAD	..	..	..	..	..	..	..	..	..	-	..	x	..	..	..	-
UNEP	x		x							-	..	x	..	..	x	-
UNHCR	..	..	..	..	..	..	..	x	..	-	..	..	x	..	x	-
United Nations bodies																
UNICEF	..	..	..	..	..	..	..	..	..	-	..	..	..	..	..	-
UNFPA a/	x	x	x	x	x	x	x	x	x	-	x	x	x	x	x	-
WFP	x	x			x	x	x	x		-	..	..	..	..	..	-
Specialized agencies																
ILO	23	15	10	8	4	20	8	7	5	100	20	20	15	25	20	100
FAO	40	25	5	5	0	10	10	0	5	100	0	10	20	10	60	100
UNESCO	19	19	0	0	0	41	12	9	0	100	0	30	0	40	30	100
WHO	5	5	2	2	35	50	0	0	1	100	6	36	22	26	10	100
World Bank a/	x	x	x	x	x	x	x	x	x	-	x	x	x	x	x	-
UNIDO	x	-	-	-	-	x	-	-	-	-	-	-	x	-	-	-

Source: Data provided by the organizations.

(Footnotes on following page)

(Footnotes to table 3)

Notes: The following symbols have been used: two dots (..) indicate that data were not provided; a dash (--) indicates that percentages are negligible; a hyphen (-) indicates that the item is not applicable; an "x" indicates that the item is of interest but percentages were not provided.

The columns include the following topics:

Population sectors:

(a) Population, resources, the environment and development

(b) The role and status of women

(c) Development of population policies: population goals and policies

(d) Population growth

(e) Morbidity and mortality

(f) Fertility and the family

(g) Population distribution and internal migration

(h) International migration

(i) Population structure

(j) Total resources to the population sectors

Functions in the field of population:

(k) Data collection and analysis

(l) Research

(m) Management

(n) Training

(o) Information, education and communication

(p) Total resources devoted to population functions.

a/ The organization provides support to all of the activities mentioned.

b/ These figures correspond to the period 1986-1988.

A. Socio-economic development, the environment and population

17. All the organizations of the United Nations system have been participating in the preparatory work for the Second United Nations Conference on the Least Developed Countries (Paris, September 1990), as well as for the United Nations Conference on Environment and Development (Brazil, June 1992). These two major conferences will include in their deliberations references to the interrelationship between population and development; several organizations are preparing contributions in that area.

18. At the Secretariat level, the Population Division completed a comparative project, based on five case-studies, which assessed the demographic consequences of major development projects. The preparation of the manual on integrating population and development has been completed. Volume I, dealing with socio-economic projections (demographic, school enrolment, labour force and employment) consists of three modules: modules one and two have already been published; module three is in press. Volume II, devoted to methodologies to project demand for goods and services by selected sectors, is now being finalized. An overview report and four country case-studies on national experiences in integrating population and development planning have been completed. An Expert Group Meeting on the Consequences of Rapid Population Growth in Developing Countries was convened in New York in August 1988, in collaboration with the Institut national d'études démographiques (INED).

19. The Population Branch of the Department of Technical Co-operation for Development has included a discussion of the interrelationship between population, the environment and the process of development in the contents of its training projects and a trilingual bibliography on the subject has been prepared as a training aid. Technical assistance in this area was provided to more than 30 developing countries during the period under consideration and guidelines and methodologies were also prepared.

20. In general, the regional commissions conduct research and analysis, provide technical assistance to member States and disseminate information. A general topic of research in this area concerns the social and economic implications of regional population trends. The Economic Commission for Europe (ECE) reported that its work continues to focus on the relationship between population and the labour markets. The activities of ESCAP during the biennium include the completion and publication of two comparative studies on the demographic and economic interrelationships in three countries of the region (Malaysia, the Philippines and Thailand) and on the results of four country studies on the integration of population and development; the implications of the results of the second study at the regional level were discussed at a regional seminar. ECLAC/CELADE indicated that its programme of work included the provision of training and advisory services to various countries for incorporating demographic variables into development strategies and in determining the social and economic effects of alternative demographic trends. The work of the Economic Commission for Africa (ECA) focused on providing assistance to member States in implementing the integration of population into development planning, as well as in the dissemination of information. In 1989, the ECA Conference of Ministers included demographic considerations in their discussion of the United

Nations Programme of Action for African Economic Recovery and Development (UNPAAERD) and the African Priority Programme for Economic Recovery (APER). The activities of the Economic and Social Commission for Western Asia (ESCWA) in this area included the preparation of the proceedings of a seminar on integration of population variables into the planning process.

21. The programme of work of other units of the Secretariat, as well as of other bodies and programmes of the Organization and the specialized agencies, includes the relationship between population and development as a component of broader development issues. The United Nations Centre for Human Settlements (Habitat), for example, treats population and development issues in its subprogramme on human settlements policies and strategies. The activities of the United Nations Environment Programme (UNEP) in this area concentrate on the provision of guidelines and technical assistance to countries; UNEP is also playing a major role in the preparatory activities for the forthcoming United Nations Conference on Environment and Development. UNFPA has begun to develop policy guidelines for integrating environmental concerns into its population activities and has designated one of its technical officers as environmental focal point for the design of projects. Its report, State of the World Population, 1988, subtitled, "Safeguarding the future", was devoted to the interrelationship between population, the environment and development. The Fund actively participates in the UNEP meetings of the Designated Officials for Environmental Matters (DOEM) of the United Nations system. In addition, one of the first UNFPA-funded projects on the interrelationship between population and the environment was held in Morocco during 1989. The achievement of food security, one of the goals stated in the Plan of Action, is one of the components of the work programme of WFP.

22. Among the specialized agencies, the International Labour Organisation (ILO) programme on population, human resources and development planning is intended to help countries in building up national institutional capacity and technical skills, mainly in planning ministries, to integrate population concerns into development planning. In this context, ILO provided assistance to more than 40 developing countries during the biennium under consideration. The Food and Agriculture Organization of the United Nations (FAO), some years ago, began developing a series of methodologies for integrating population variables into agricultural development planning which are currently known as the Computerized Agricultural and Population Planning Assistance (CAPPA) system; the new activities in this area are concentrated on disseminating the system and training national planners in the demographic aspects of rural development planning. The medium-term plan of UNESCO for the period 1990-1995 contemplates a series of new activities that include micro-level and macro-level research on social and cultural factors affecting population change, as well as the reinitiation of activities in the field of population and the environment. The World Bank continues its programme of research and analysis of economic conditions at the global level and of those developing countries in which population and development are matters of concern; environmental concerns have been integrated into the mainstream of the Bank's operational and policy work.

B. The role and status of women

23. In the United Nations system, the focal point for activities concerning the role and status of women is the Centre for Social Development and Humanitarian Affairs of the United Nations Office at Vienna (CSDHA/UNOV). The Centre analyses the rights and status of women, monitors the progress made in integrating women into the process of development and reviews and appraises the progress made towards achieving the goals of the United Nations Decade for Women and the Nairobi Forward-looking Strategies for the Advancement of Women. The Population Division began the preparation of two case-studies on the condition of women and patterns of child-bearing and child-rearing, and two seminars on migration and women. The work programme of the Statistical Office of the Department of International Economic and Social Affairs includes an ongoing activity devoted to maintaining a data bank with indicators related to the condition of women. It has published a wall chart, "The situation of women, 1990", with funding from UNFPA. The Population Branch of the Department of Technical Co-operation for Development emphasizes the participation of women in technical co-operation projects, and a study on women's statistics is currently under way in Burkina Faso.

24. The activities of the regional commissions in this area are usually carried out through their social development programmes. ESCWA is the only commission that does not have activities in this area owing to a lack of financial resources. ECE, with financial assistance from the International Research and Training Institute for the Advancement of Women (INSTRAW), finalized four studies on women's time-use. ESCAP published two volumes of an annotated bibliography on women in development in Asia and the Pacific. ECLAC/CELADE provided assistance to Panama in conducting a study on the socio-economic status of women and fertility, organized a regional seminar on women in development (May 1989) and prepared a study on the relationship between women and demographic variables in different socio-economic settings and the possible demographic effects of development projects focusing on the status of women. The ECA African Training and Research Centre for Women continued its programme of work; the Joint Conference of African Planners, Statisticians and Demographers, at its sixth session, urged ECA to extend its activities in this area. The Office of the United Nations High Commissioner for Refugees (UNHCR) produced policy guidelines on refugee women, who with their dependants represent the majority of refugees; a post of senior co-ordinator for refugee women has recently been created. UNFPA and the other members of JCGP established a working group on women in development; in 1987, UNFPA adopted a four-year strategy to strengthen its capacity to deal with issues concerning women, population and development, and a mid-term review was submitted to the Governing Council of UNDP at its thirty-sixth session; as a result of the review, UNFPA was able to identify priority areas for future action at the field level. UNFPA published a training manual, Gender Analysis for Project Design, in three languages, and The State of the World Population, 1989, was subtitled "Investing in women: the focus of the nineties". WFP requires that all development projects it assists be assessed in terms of their responsiveness to gender issues, and has implemented staff training to build up institutional capacity in addressing these issues; WFP has sector-specific guidelines to address gender issues in project design and the ways they can be effectively addressed.

25. Among the specialized agencies, ILO has endeavoured to make all its technical co-operation projects "gender sensitive", has made assessments of women's contributions to national accounts and has continued to provide assistance to Governments and non-governmental organizations concerning various issues relating to women's economic activities. The work of FAO includes assistance to countries for improving the status of women through economic programmes and encourages the involvement of rural women in fact-finding to determine their own needs, as well as in the design of training curricula and materials to meet those needs. UNESCO was involved in the promotion of women's studies in higher education and in training activities on the role of rural women in environmental protection and on migrant women as agents of change. The work of the World Health Organization (WHO) emphasizes maternal health and health for all women. The World Bank has requested each department director to prepare brief assessments on women in development, outlining specific actions planned for the next three to four years. In addition, the Bank began a new key area of research on women's economic productivity.

C. Development of population policies

26. Within the Secretariat, the Population Division carries out the monitoring of national population policies, maintains a population policy data bank and conducts research and analysis in this area. During the period under consideration, the Division published various reports on selected mega-cities, as well as national case-studies, on population policy. The Population Branch of the Department of Technical Co-operation for Development continued its programme of assistance in the formulation, implementation and evaluation of integrated population policies, as well as in the training of population specialists. Since 1988, efforts have been made to document these experiences in order to share them with developing countries.

27. Virtually all of the regional commissions have some activities that include the analysis of governmental actions affecting population variables and, with the exception of ECE, all of the commissions provide assistance to member States in the formulation of their population policies. ECE recently began the design of a project for the collection of information on population policies, which would eventually lead to a continuous monitoring of policies in the region. ECA prepared a study on the status and prospects of population policies in the region and set up an integrated policy data base.

28. Among the various organs, programmes and specialized agencies, the United Nations Conference on Trade and Development (UNCTAD) has the responsibility for monitoring the Programme of Action for the Least Developed Countries for the 1990s, including population policies. UNEP emphasizes the complementarity between population and environmental policies, and its State of the Environment reports make reference to those interrelationships. The Environmental Perspective to the Year 2000 and Beyond, adopted by the Governing Council of UNEP in November 1987, provides assessment and guidance in addressing population issues within the framework of an integrated approach to environment and development. UNFPA assistance focused on methods and techniques for policy formulation and development planning, research and institution-building and provided support for the establishment of population units inside governmental offices. ILO continued its

programme of assistance to countries in the formulation of national population policies, with particular emphasis on African countries. The programme has provided guidelines for the monitoring and evaluation of population policy measures. The work of other specialized agencies in this area included assistance to countries in the formulation of their respective sectoral or global policies, taking into consideration population concerns.

D. Population goals and policies

1. Population growth

29. The work carried out in this area is usually part of other activities such as population projections, population and development and population policies, or through the consideration of the components of population growth (fertility, mortality and migration). The Population Division published the 1988 revision of its biennial series of global population estimates and projections (a magnetic tape and IBM-PC compatible diskettes were issued in 1989); the Division plans to produce long-range projections to the year 2100 for regions and major areas.

2. Morbidity and mortality

30. Within the Secretariat, the Population Division developed a model that estimates the effects of successful malaria control programmes on mortality, concluded the preparation of a user-friendly guide to the estimation of infant and child mortality that includes a programme for use on personal computer, completed a computer simulation model to estimate the impact of family size limitation and child-spacing on child mortality, and continued a study on the assessment of socio-economic differentials in early-age mortality in selected developing countries.

31. The work done in this area by the regional commissions includes comparative research analyses and assistance to countries in the collection and analysis of their data; in many cases, research in mortality is an ingredient of other population activities, such as estimations and projections, or is linked to research on other demographic variables, as in the case of the studies carried out by ESCAP and ECA on the relationships between infant and child mortality and fertility behaviour. ECLAC/CELADE provided assistance to various countries in the identification of high-risk groups in terms of infant mortality, in the analysis of geographic and socio-economic differences in child mortality and in the study of cause-specific mortality that includes the development of indirect procedures for measuring maternal mortality. ECA is carrying out a comparative geographic analysis of mortality levels, trends and differentials that includes the preparation of life tables for some central African countries.

32. UNICEF gives special emphasis to the improvement of maternal and child health and was instrumental in the preparation and negotiations that, after 10 years, led to the adoption by the General Assembly of the Convention on the Rights of the Child. In addition to providing support to maternal and child health programmes,

UNFPA worked closely with WHO and other organizations, notably UNICEF, in a series of activities related to the prevention of the spread of acquired immunodeficiency syndrome (AIDS), by incorporating information and education materials into maternal and child health activities, developing and supplementing information and education programmes and providing support in the use of barrier methods to high-risk groups. Other activities that are linked to the area of morbidity and mortality include (a) the preparation of environmental standards by UNEP, (b) housing and human settlements activities by the United Nations Centre for Human Settlements (UNCHS) (Habitat), (c) food security by WFP, and (d) protection of refugees by UNHCR.

33. The work of the specialized agencies in this area is closely related to their specific mandates: ILO is concerned with working and health conditions, FAO with agricultural production and nutrition, and UNESCO with health and environmental concerns in population education. The work of WHO, which is guided by the Global Strategy for Health for All by the Year 2000, encourages acceptance of the global targets for mortality reduction adopted by the Strategy (and reconfirmed in the recommendations for the further implementation of the World Population Plan of Action), and fosters and supports national policies and programme development towards the attainment of the national goals consonant with the Strategy; support is also provided for the improvement of national data management in regard to morbidity and mortality. WHO emphasizes improvement in the level of maternal health as part of a coherent population policy. Maternal mortality has been recognized as a key indicator for monitoring progress towards Health for All; WHO activities are aimed at redressing the social inequities confronting women, ensuring that couples have access to family planning and improving the effective availability of community-based maternity care. Through its activities in the area of population, health and nutrition, the World Bank assisted some countries in strengthening their health systems and in designing activities to deal with particular diseases (e.g., malaria and AIDS).

3. Reproduction and the family

34. At the Secretariat level, the Population Division initiated a cross-national study on marriage trends, concluded a global study on first-marriage patterns that covers the period 1950-1985, published two studies on adolescent reproductive behaviour in developed and developing countries, which were preceded by an annotated bibliography on the subject, convened an expert group meeting on methodologies for measuring contraceptive use (December 1988), and published an updated wall chart on world contraceptive use. The Population Branch of the Department of Technical Co-operation for Development assisted some countries, particularly in Africa, in improving their family-planning data bases, as well as in analysing the implications of such programmes and the means to strengthen their institutional arrangements.

35. ECE began a project on the promotion of fertility and family-planning surveys in the 1990s. ESCAP initiated two studies, one on the level of accessibility to contraceptives for rural couples and the second on the interactions between clients and grass-root family-planning workers. A research project on knowledge and

attitudes of family-planning workers in relation to various contraceptive methods and their impact on service delivery was concluded. ECLAC/CELADE began an inventory of information systems of governmental and non-governmental maternal and child health and family-planning programmes and continued its assistance to selected countries in the design of surveys to collect data on the demand for family planning. It also provided assistance to countries, within the framework of the elaboration of estimates and projections, in determining fertility levels and trends and in specific studies on socio-economic differentials of fertility. ECA conducted various research studies on the proximate determinants of fertility, the effects of nuptiality variables on fertility, the impact of maternal and child health and family-planning programmes, and the legislative and socio-cultural factors affecting family formation and fertility.

36. UNFPA has been given instructions by its governing body to allocate first priority in its programme of work to family planning; during the biennium under consideration the Fund devoted nearly half of its programme allocations to these activities through more than 500 country and inter-country projects; in addition to providing assistance for the delivery of services, training of personnel and strengthening of managerial capabilities, the Management Information Systems Unit of UNFPA prepared logistic studies on the follow-up to programmes in this area. UNICEF includes family planning as a component of its strategy for child survival. UNHCR and WFP also include family-planning activities in their programmes of assistance.

37. Among the specialized agencies, ILO, under its Population and Family Welfare Education Programme, provided assistance to about 60 projects in developing countries. Other ILO activities include ongoing research on the relationship between parents' need for security in old age and fertility and the use of family planning. The educational activities of FAO and UNESCO include important elements intended to affect reproductive behaviour. UNESCO carried out research on the prerequisites for the success of strategies and policies concerning the family, as well as on cultural patterns affecting fertility change. WHO supports activities in the area of reproduction and the family through its maternal and child health and family-planning programmes, its activities regarding the reproductive health of adolescents, and research on human reproduction. The activities of the United Nations Industrial Development Organization (UNIDO) in this area include assistance in the local production of contraceptives. The World Bank assists countries in the area of family planning. Some projects are aimed at increasing the efficiency and cost-effectiveness of the services-logistics system, or the promotion of lower fertility through the effective use of modern and traditional child-spacing methods.

4. Population distribution and internal migration

38. Within the Secretariat, the Population Division, in addition to its studies on mega-cities mentioned above, published estimations and projections of urban and rural population and urban agglomerations in conjunction with the 1988 revision of global population estimates and projections, and concluded a comparative study of patterns of internal migration in six developing countries. The Population Branch of the Department of Technical Co-operation for Development assisted countries in

conducting small-scale surveys on migration and studying "push and pull" factors affecting migration, and helped to organize seminars on population, urbanization and regional planning.

39. Among the regional commissions, ESCAP continued its publication of case-studies on internal migration as related to urbanization and to structural changes in the labour force, and began a policy-oriented project on problems related to rapid urbanization, particularly in relation to the mega-cities of the region. ECLAC/CELADE continued to update its data base on trends in spatial redistribution and urbanization, and provided assistance to several countries in the preparation of reports on urban hierarchies and functional bases of cities, analyses of economic and social factors associated with internal migration, and the impact of migration on metropolitan growth. ECA was involved in a study on patterns, causes and determinants of urbanization that includes the study of the relationship between nuptiality and urbanization in selected countries. Another study focused on the evaluation of population distribution and redistribution policies.

40. UNCHS (Habitat) expanded its activities both in urban management and in institution-building, and initiated a research programme focused on national experiences in implementing human settlement programmes and projects. The activities of UNFPA in this area concentrate mainly on the dissemination of information and the creation of awareness in relation to rapid urban growth, and assistance is provided to policy-oriented research.

41. ILO launched a major research programme on the problems of urbanization and growth of large cities that includes detailed studies of eight large cities; other reported activities refer to eight country case-studies evaluating the effect of land settlement policies on population redistribution, employment and poverty reduction. The FAO research programme in this area included a study of the effects of rural-urban migration on rural family life and agricultural production. FAO intends to promote research on demographic changes on the sites of large development projects in the rural areas. UNESCO prepared a study of disadvantaged urban communities that included a pilot project focusing on the rehabilitation of an urban area in Africa. The activities of the World Bank in this area are a part of larger economic projects.

5. International migration

42. Within the Secretariat, the Population Division published a summary and analysis of world migrant populations, containing information on the foreign-born by sex, and continued to expand its data bank on international migration. ECE intends to initiate a study on the socio-economic and demographic determinants and implications of international migration in the region. ECLAC/CELADE prepared an analysis of international migration in Latin America using data from population censuses and the International Migration in Latin America (IMILA) data bank, carried out a feasibility study for an information system on displaced persons in Central America and provided assistance in the elaboration of information-gathering procedures that include the concepts of "multi-residence" and "residence

reversibility". The work of UNCTAD relating to the negotiation of multilateral trade agreements includes an analysis of the impact and the socio-economic aspects of the outflow of skilled workers and professionals. The work of UNHCR centred on the provision of international protection to refugees and the preparation of instruments on the status of refugees for consultations and negotiations with concerned Governments.

43. Among the specialized agencies, ILO continued its research on the conditions of migrant workers and their families, and organized three international meetings on the impact of the integration of Europe in 1992 on the situation of migrants from outside the region, as well as on the problems faced by migrant children, and the integration of return migrants in their countries of origin. Assistance was provided to sending countries on mechanisms for improving the reintegration of return migrants. UNESCO reported the provision of training on the social and cultural consequences of international migration, with emphasis on the adaptation of migrants.

6. Population structure

44. The Population Division completed case-studies on the demographic and socio-economic consequences of demographic aging in three developing countries, and organized the Conference on Aging Populations in the Context of Urbanization, which was held at Sendai, Japan, in September 1988. The programme of work of CSDHA/UNOV in this area includes the follow-up to the International Youth Year and the Plan of Action on Aging. ECE completed a study on the socio-economic consequences of changes in the population structure of the countries of the region. ESCAP concluded a comparative study on emerging issues of the aging of populations in four countries; the results were discussed in a regional seminar, held at Kuala Lumpur in July 1989. ECLAC/CELADE provided assistance to selected countries in the region for the study of the socio-economic impact of aging.

45. The activities of UNICEF concerning the protection of children were mentioned above in the section on mortality. UNFPA provided support for eight projects in the field of aging in developing countries. The specialized agencies reported the inclusion of some issues on youth and the elderly in their work programmes. ILO indicated that it is investigating the effect of aging on labour force participation and on the standards of living of the elderly.

E. Promotion of knowledge and policy

1. Data collection and analysis

46. The activities of the United Nations system in this area have benefited from the existence of the ACC Ad Hoc Inter-Agency Working Group on Demographic Estimates and Projections, the only formal co-ordinating mechanism in the field of population. The Population Division and the Statistical Office of the Department of International Economic and Social Affairs, the regional commissions, UNICEF, UNFPA, ILO, FAO, UNESCO, WHO and the World Bank are the regular members of the

Working Group, which meets every two years. The Population Branch of the Department of Technical Co-operation for Development continued to provide assistance to countries in the training of personnel in this area. The work of the Statistical Office focused on the 1990 World Population and Housing Census Programme, as well as on improving civil registration and vital statistics for special groups, in particular children and the disabled. UNFPA is a major source of financial assistance in this area. During the period under consideration, it provided funds to over 75 countries for the purpose of taking population censuses, to more than 23 countries for conducting surveys, to over 20 countries for their civil registration/vital statistics systems, and to more than 54 countries for undertaking demographic analyses.

47. The activities of the regional commissions include the compilation and analysis of demographic data and assistance to countries in their own data collection and analysis, particularly in relation to the 1990s round of population censuses. During the period under consideration, ECLAC/CELADE reported the preparation of new low-cost procedures to be used at the local or community level and the holding of a regional seminar on the collection and processing of demographic data, in which experts from other regions also participated. ECA compiled a demographic handbook on African data, to be used as a handy reference for secondary analysis.

2. Research

48. The preceding sections of the present report contain a number of examples of the research activities being carried out by the various entities of the United Nations system. In addition to those examples, some units and organizations, namely the Population Branch of the Department of Technical Co-operation for Development, UNFPA, ILO, FAO and the World Bank, in their programmes of work, have provided assistance to countries for the purpose of building up their research capabilities. Of particular importance is the WHO Programme of Research, Development and Research Training in Human Reproduction, the objective of which is to develop and test new contraceptive technology and to assess all socio-cultural factors affecting the acceptance of family planning.

3. Management, training, information, education and communication

49. The management of population programmes continues to be one of the areas of concern to the various units and organizations of the United Nations system and is considered one of the weakest areas in many programmes, not only in relation to service delivery and supervision but also in relation to the functioning of population units inside governmental structures. Among the regional commissions, ESCAP reported having a project designed to examine and assess some existing management information systems in the region in order to prepare improved methodologies. UNFPA completed the testing of guidelines, prepared in 1986, for the monitoring and evaluation of the projects and programmes supported by the Fund. It also commissioned a series of studies of management information systems in the field of maternal and child health/family planning in a number of

countries. Managerial concerns are also an important component of the activities of technical assistance provided by the specialized agencies.

50. The preceding sections discuss some of the activities carried out in the area of training by various entities of the United Nations system. The Population Branch of the Department of Technical Co-operation for Development assisted in incorporating demographic components in the training of governmental officers. It also gave special emphasis to the training of trainers and intermediate and higher-level population specialists. The Population Branch published an assessment of the United Nations Fellowship Programme covering the period 1953-1983. ESCAP is providing support in the use of micro-computers for demographic analysis, survey data processing and family-planning evaluation. ECLAC/CELADE indicated that its Master's programme came to an end and that a 10-month post-graduate course in population dynamics and development was initiated. ECLAC/CELADE also organized various intensive courses on demographic analysis at the national and regional level, as well as workshops and seminars on specific population subjects, and collaborated with various universities in the region. ECA provided assistance to training activities in the region, mainly through regional training institutions such as the Institut de formation et de recherche démographiques (IFORD) at Yaoundé, and the Regional Institute for Population Studies (RIPS) at Accra, and regional advisory services to member States. The training programmes supported by UNFPA at the Catholic University of Louvain (Louvain-la-Neuve, Belgium), at the Institute of Social Studies (The Hague, Netherlands) and at the Centre for Development Studies (Trivandrum, India) continued to expand and their courses were supplemented by lectures by outside experts, many of whom were drawn from the United Nations system.

51. In the area of population information dissemination, all the units and programmes of the system have activities aimed at disseminating guidelines, research results, intergovernmental agreements and provisions. Those with identifiable population programmes participate in the Population Information Network (POPIN), which co-ordinates population information activities at the regional and global levels. The network has a membership of some 100 institutions. ESCAP provided technical assistance and training to improve the utilization of population data and information. ECA reported population information activities through POPIN-Africa, which is the regional component for Africa.

Notes

1/ Report of the United Nations World Population Conference, Bucharest, 19-30 August 1974 (United Nations publication, Sales No. E.75.XIII.3), chap. I, para. 108.

2/ Report of the International Conference on Population, Mexico City, 6-14 August 1984 (United Nations publication, Sales No. E.84.XIII.8 and corrigenda), chap. I, sect. B.